

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. **(Original)** An apparatus to measure a concentricity of optical components in an optical assembly, said optical assembly comprising a header with a photonic device mounted thereon, said photonic device having a first optical axis, said optical assembly further comprising a cap having a lens therein, said lens having a second optical axis, the apparatus comprising:

 a chuck configured to support said optical assembly, said chuck being adapted to support said optical assembly without obstructing a view of at least a portion of said lens;
and

 a visual display system adapted to depict a position of said lens relative to said photonic device and to measure said position.

2. **(Original)** The apparatus of claim 1, wherein said measurement is used to determine said concentricity between said first optical axis and said second optical axis.

3. **(Original)** The apparatus of claim 1, wherein said visual display system comprises at least one camera and at least one video display.

4. **(Original)** The apparatus of claim 3, wherein said camera further comprises a zoom lens.

5. **(Original)** The apparatus of claim 3, wherein said visual display system includes a video overlay including at least one calibration feature that allows said concentricity to be measured.

6. **(Original)** The apparatus of claim 5, wherein said calibration feature allows said concentricity to be measured to within 1 micron.

7. **(Original)** The apparatus of claim 1, wherein said lens is a ball lens and said photonic device is a laser.

8. **(Original)** The apparatus of claim 7, wherein said first optical axis is collinear with a beam emitted from said laser.

9. **(Original)** The apparatus of claim 7, wherein said second optical axis passes through a center of said ball lens.

10. **(Original)** The apparatus of claim 1, wherein said visual display system is movable relative to said chuck.

11. **(Original)** The apparatus of claim 1, wherein said chuck is movable relative to said visual display system.

12. **(Original)** A method for measuring a concentricity of optical components in an optical assembly comprising:

a step for providing an optical assembly, said optical assembly having at least one component mounted on a base;

a step for mounting said optical assembly in a chuck;

a step for measuring said concentricity of said component relative to said base using a visual display system.

13. **(Original)** The method of claim 12, wherein said visual display system comprises at least one camera and at least one video display.

14. **(Original)** The method of claim 13, wherein said camera further comprises a zoom lens.

15. **(Original)** The method of claim 13, wherein said component is a laser having a first axis and said base is a header having a second axis parallel to said first axis, and wherein the step for measuring measures the distance between said first axis and said second axis.

16. **(Original)** The method of claim 13, wherein said visual display system includes a video overlay including at least one calibration feature that allows said concentricity to be measured.

17. **(Original)** The method of claim 16, wherein said calibration feature allows said concentricity to be measured to within 1 micron.

18. **(Original)** A method for measuring a concentricity of optical components in an optical assembly, said optical assembly comprising a header with a photonic device mounted thereon, said photonic device having a first optical axis, and a cap having a lens therein, said lens having a second optical axis, said method comprising:

a step for viewing said photonic device through said lens;

a step for measuring a distance between said first optical axis and said second optical axis.

19. **(Original)** The method of claim 18, wherein said step for viewing comprises a step for viewing said photonic device by a video display system.

20. **(Original)** The method of claim 19, wherein said video display system comprises at least one camera and at least one video display.

21. **(Original)** The method of claim 20, wherein said camera further comprises a zoom lens.

22. **(Original)** The method of claim 20, further comprising a step for overlaying a calibration pattern on said video display.

23. **(Original)** The method of claim 22, wherein said calibration pattern allows said distance to be measured to within 1 micron.

24. **(Original)** The method of claim 18, wherein said lens is a ball lens and said photonic device is a laser.

25. **(Original)** The method of claim 24, wherein said first optical axis is collinear with a beam emitted from said laser.

26. **(Original)** The method of claim 25, wherein said second optical axis passes through a center of said ball lens.

27. **(Original)** The method of claim 18, wherein said optical assembly is held in an arm and said visual display system is movable relative to said arm.

28. **(Original)** The method of claim 18, wherein said optical assembly is held in an arm and said arm is movable relative to said visual display system.

29. **(New)** The method of claim 12, wherein the method is a passive method for measuring a concentricity of optical components in an optical assembly.

30. **(New)** The method of claim 18, wherein the method is a passive method for measuring a concentricity of optical components in an optical assembly.